

REMARKS

In the Office Action, claims 1-11, 13-24 and 26-45 were rejected, and claims 12 and 25 were objected to. By the present response, claims 1, 4, 5, 9, 12, 14, 24, 26, 31, 38, 40, and 42 are amended. Upon entry of the amendments, claims 1-45 will remain pending in the present patent application. Reconsideration and allowance of all pending claims are requested.

Rejections Under 35 U.S.C. § 103

Claims 1-11, 13-24 and 26-45 were rejected under 35 U.S.C. § 103(a) as being unpatentable Miyamoto et al., U.S. Patent No. 4,672,346 (hereinafter “Miyamoto”) in view of Sellers, U.S. Patent No. 5,431,165 (hereinafter “Sellers”).

Independent claims 1, 14, 26, and 31 are amended to more clearly point out certain of the claimed subject matter. Specifically, each independent claim now recites, in generally similar language, *that the fixed permanent magnet body has an opening and the movable permanent magnet body is disposed in the opening and movable relative to the fixed permanent magnet body*. Applicants respectfully submit that Miyamoto and Sellers, alone or in combination, do not teach, suggest or disclose each and every aspect of Applicants’ recited invention as claimed in amended independent claims 1, 14, 26, and 31.

Miyamoto discloses a rod-like soft magnetic material inserted in the support through a hole in the support. The Applicants respectfully submit that the hole disclosed in Miyamoto does not extend to the fixed permanent magnet body. Further, the movable rod-like soft magnetic material is not same as the movable permanent magnet body claimed.

The Examiner argued that it would have been obvious to use a permanent magnet in place of soft magnet taught by Miyamoto. Applicants submit that those skilled in the art would have concluded the opposite, given the teachings of the references. *The plug as described in Miyamoto is not differentially affected, as the soft magnetic or ferromagnetic plug would be influenced only by the flux of the permanent magnet.* There would not be any interaction of magnetic fields that would pose any problem with assembly or adjustment. In fact, using a permanent magnet inside another permanent magnet posses many problems with field interaction, polarity and so on. In other words, the *interaction or influence of a soft magnetic material over the magnetic field of a permanent magnet when the soft magnetic material moves inside the permanent magnet would be different than that of a permanent magnet moving inside another permanent magnet, as claimed.*

Further, the use of two permanent magnets in an arrangement as disclosed in Miyamoto (see, Fig. 13) is not same as the use of two permanent magnets in an arrangement as claimed. Miyamoto, in Fig. 13, describes moving permanent magnets *outside* the fixed permanent magnets. Hence, the permanent magnets of Fig. 13 in Miyamoto do not constitute the permanent magnet assembly and do not accomplish the same results of the permanent magnet assembly claimed.

Sellers fails to obviate this deficiency in the teachings of Miyamoto. *Sellers clearly does not show the movable permanent magnet to be within the fixed permanent magnet.* The Examiner stated that the use of permanent magnets for shimming of magnetic fields in the MRI construction art is well known and cited Sellers reference as an example. Clearly, this is not same as using a movable permanent magnet body within a fixed permanent magnet body as claimed. The mere fact that Sellers discloses using a permanent magnet for shimming of magnetic fields is not sufficient to teach or suggest to one skilled in the art the use of a

movable permanent body within the fixed permanent magnet body so as to adjust the B_0 field for permanent MRI magnets.

Even if combined, Miyamoto and Sellers provide no teaching whatsoever of a movable permanent magnet body placed within an opening of a fixed permanent magnet body as recited in the claims. Consequently, the combination of Miyamoto and Sellers simply cannot suggest to one skilled in the art all of the recitations of amended claims 1, 14, 26, and 31.

In view of the forgoing considerations, Applicants contend that the references fail to establish a *prima facie* case of obviousness of claims 1, 14, 26, and 31. These claims and the claims depending therefrom are therefore believed to be clearly patentable over the cited combination, and over combinations with the other secondary references. Thus, it is respectfully requested that the rejections of claims 1-45 under 35 U.S.C. §103(a) be withdrawn.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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